

## APPARATUS AND METHOD FOR RE-SENDING DATA ON COMMUNICATION CHANNELS

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### Abstract of the Disclosure

10 A multi-channel transmission system that provides dynamic mapping of data to  
channels is described. In one embodiment, a packet of data to be transmitted is broken  
up into a number of fragments. Fragments are loaded into transmit buffers. Active  
15 buffers are indicated by bits in an active-fragment register and active channels are  
indicated by bits in an active-channel register. A transmit buffer to channel mapping is  
provided by multiplexers. The multiplexers are controlled by a channel mapping table  
that uses the data in the active-fragment register and the active-channel register to  
20 decide which transmit buffers are mapped to which channels. Each transmit buffer can  
be simultaneously mapped to more than one channel in order to allow the same data to  
be simultaneously transmitted on more than one channel, thereby increasing the  
likelihood that the data will be successfully transmitted even if some of the channels are  
rendered inoperative. In one embodiment, an acknowledgement sent by a receiver  
25 indicates which channels are operative and which channels are inoperative.

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